REMARKS

Applicants have amended the claims as shown above. The amendments incorporate the description of terms in the specification and place the claims in better form for appeal, notice of which is filed concurrently herewith.

Applicants have amended independent Claims 1 and 51 to recite steps of the methods as described in the specification and as demonstrated in actual examples of the invention (i.e., Examples 1-19), to incorporate aspects of formerly dependent claims into Claims 1 and/or 51, and, overall, to simplify the claim language.

Amendments to Claims 1 and 51

Applicants have amended Claims 1 and 51 to specify that nucleic acids isolated according the methods of the invention are charged and immobilized to the "top side" of a non-siliceous surface that has a "top side" and an opposing "waste side" and that after release, the nucleic acids are removed without retrieving materials that have contacted the waste side of said non-siliceous surface. Description of these aspects of the non-siliceous surface and removal of released nucleic acids without retrieving materials that have contacted the waste side of the surface are clearly described throughout specification, including by a variety of illustrative examples in which the process may be employed:

> "In preferred embodiments . . . the buffer in which the nucleic acids are to be found while charging, including in some cases a washing buffer, are drawn through the surface or otherwise transferred. When the isolation takes place on a membrane which is in a device, where the membrane covers the entire diameter (cross-section) of the device, then the preferred direction of charging is **from the top**. In this case, the removal step takes place again **from the top**. Figure 2, for example, shows a funnel-shaped isolation device which is charged **from the top** and with which the removal of the nucleic acids takes place in an upward direction." (p. 5, lines 9-16, of the specification, emphasis added)

> "The last step is the elution of the nucleic acid, which can be drawn off or removed by a pipette or removed upward in some other way. In any case, what is essential for the elution step, in the procedure on which this invention is based, is that the nucleic acids are removed from the same side of the membrane from which they were applied to the membrane, i.e., that there is no passage of nucleic acids through the membrane. This series of procedures makes it possible to transfer all the fluids no longer needed, such

> as original lysis buffer and the washing buffers, by vacuum or gravity to the **'waste side'** of the membrane, while the eluate remains on the other side." (p. 11, lines 6-13, of the specification, emphasis added).
>
> "For the elution 70 µl of RNase-free water was transferred onto the membrane in order to release the purified RNA from the membrane. After incubation . . . the eluate was transferred from the membrane **from the top** and the elution step was repeated in order to make sure that the elution was complete." (Example 1, at p. 17, lines 4-7; Example 3, at p. 20, lines 5-8, of the specification, emphasis added).
>
> "After that, the solutions containing RNA were transferred into the plastic columns and suctioned through the membrane by evacuating the vacuum chamber. Under the conditions described, the RNA remained bound to the membranes. The membranes were then washed as described in Example 1.
>
> Finally, the RNA (as described in Example 1) was removed from the membrane by pipetting **from the top**." (Example 2, at p. 18, lines 24-29, of the specification, emphasis added).

Multiple demonstrations of the claimed methods involving charging and immobilizing nucleic acids on, and eluting and removing nucleic acid from, the top side of a non-siliceous surface without retrieving material that has contacted the opposing waste side are also provided in the 19 working examples of the specification (see, Examples 1-19 at pp. 16-39, of the specification). Accordingly, independent Claims 1 and 51, as amended herein, accurately recite the essential conditions and elements of the methods of the invention as described and demonstrated in the specification without introducing any new matter.

To simplify the claim language, Applicants have also amended Claims 1 and 51 to state that nucleic acids are immobilized on the top side of the non-siliceous surface in the presence of two essential components: a salt and an alcohol. The salt component may be a salt selected from group consisting of salts of alkaline or alkaline earth metals with mineral acids, salts of monobasic, polybasic, or polyfunctional organic acids and an alkaline or alkaline earth metal, and chaotropic trichloroacetate, thiocyanate, and iodide salts, guanidium hydrochloride, and combinations thereof (see, e.g., the discussion of salts, including chaotropic salts, that are useful

in the invention at p. 6, line 29-p. 7, line 22, of the specification). The amendments to Claims 1 and 51 also specify with particularity the embodiment wherein the alcohol component useful in the methods of Claims 1 and 51 is selected from the group consisting of a C1-C5 alkanol, a polyvalent C1-C5 alkanol, a phenol, or a polyphenol (see, e.g., the description of alcohols useful in the invention at p. 7, line 23-p. 8, line 2, of the specification). In addition, each of the 19 examples of the application provides a demonstration of using selected representative combinations of such salts and alcohols to effectively immobilize nucleic acids to the top side of a non-siliceous surface:

In Examples 1, 6: guanidinium hydrochloride and ethanol

In Example 2: various salts: guanidinium isothiocyanate, sodium acetate, sodium chloride, or lithium chloride, and ethanol

In Examples 3-5, 8, 10, 12, 14-19: guanidinium isothiocyanate and ethanol

In Example 9: guanidinium isothiocyanate and ethanol or isopropanol

In Example 11 and Table 9: sodium chloride, potassium chloride, or magnesium sulfate and ethanol

Example 13 shows that phenol alone, in absence of an alcohol component yielded unsatisfactory results.

Example 19 shows that use of silica membranes yield unsatisfactory results.

Accordingly, the amendments incorporate into the claims a description of the invention provided by the original disclosure and examples and, therefore, add no new matter.

Applicants have also amended Claims 1 and 51 to incorporate the aspect of the invention particularly illustrated by Example 11 and Table 9 (see, p. 29, line 4-p. 30, line 4, of the specification), i.e., that the claimed methods are effective when the salt component (employed in combination with an alcohol component) is present at a concentration of at least 10 mM (see, e.g., 10 mM $MgSO_4$ in Table 9).

Applicants have also amended Claims 1 and 51 to incorporate the aspect of the invention illustrated by Example 5 and Table 5 (p. 24, line 5-p. 25, line 4, of the specification), i.e., that the claimed methods are particularly effective in isolating nucleic acids using non-siliceous surfaces that have pores of at least 0.2 μm in diameter.

Finally, Applicants have amended Claims 1 and 51 to make clear that the step of immobilizing nucleic acids to the top side of the non-siliceous surface does not involve the presence of any cationic detergent component. This amendment is consistent with the written description, including the 19 working examples of the specification, and is made to expressly distinguish the invention from any other method that may require or comprise the participation of a cationic detergent to effect the step of immobilizing nucleic acids to the non-siliceous surface, e.g., as to make cationic detergent micellar complexes with DNA as described in European application No. 0442026 ("Schneider", of record). Accordingly, the amendment is supported by the written description and adds no new matter.

Entry of the amendments to Claims 1 and 51 is respectfully requested.

Amendments to other claims

Applicants have amended Claim 4 to further specify the embodiment of the invention wherein a washing buffer may not only be drawn through the non-siliceous surface by suction but also "by centrifugation" as noted in the text (see, in the specification, e.g., p. 10, lines 26-29, of the specification) and as demonstrated in the examples of the specification (see, e.g., in Example 3 at p. 19, lines 29-30; in Example 4 at p. 22, lines 12-14; in Example 6 at p. 25, lines 14-17; in Example 8 at p. 26, lines 25-28; and, similarly in Examples 9-19, at pp. 27-38, in the specification).

Applicants have also amended Claims 5, 10-13, 19, 20, 22, 26-31, 62, 63, and 69-74 to recite language consistent with the amendments to Claims 1 or 51 from which they depend. Accordingly, the amendments ensure consistency in recitation of terms throughout the claims and add no new matter.

Claim 37 is amended to improve the grammar of the language by more closely connecting a broader term, i.e., "nylon", previously recited in a list in Claim 36 with a preferred embodiment of that term, i.e., "hydrophobisized nylon". The amendment is supported by the specification (see, e.g., p. 9, lines 4-7, of the specification) and adds no new matter.

Claims 59 and 60 are amended to delete a superfluous article ("a") from the claims. Accordingly, the amendment adds no new matter.

Applicants have amended Claim 20 and added new Claim 76 to cover embodiments of the invention wherein a C1-C5 alkanol useful in the claimed methods is selected from a preferred

list of alcohols. Support for the amendment to Claim 20 and new Claim 76 is found throughout the specification (see, e.g., p. 8, lines 1-2 (several alcohols), Example 9 and Table 7 at p. 27, line 7-p. 28, line 4 (use of ethanol or isopropanol), and therefore adds no new matter.

Entry of the amendments in the above Listing of the Claims is respectively requested.

Response to Rejection Under 35 USC § 112, first paragraph

In the Office Action, the Examiner rejected Claims 1-5, 9-22, 24-41, 44-51, 53-55, 58-64, and 67-75 under 35 USC § 112, first paragraph, based on his view that there is a lack of written description for a negative limitation introduced into Claims 1 and 51 in Applicants' previous amendment (submitted August 11, 2005) to expressly distinguish the claimed invention from prior art methods cited by the Examiner. In particular, the Examiner objected to the limitation "where the released nucleic acids do not penetrate to or make contact with the other opposing side of the non-siliceous surface on which the nucleic acids were not immobilized" as containing new matter that is not supported by the written description. Applicants respectfully traverse the rejection for the reasons provided below.

Applicants note that Claims 1 and 51, as amended herein, no longer recite the specific phrase objected to by the Examiner, however, the amended claims contain other phrases that expressly exclude aspects of the prior art:

> that the nucleic acids are immobilized on the top side of the non-siliceous surface in the absence of a cationic detergent
>
> the nucleic acids are removed or collected without retrieving materials that have contacted the waste side of the non-siliceous surface

That nucleic acids are immobilized on the top side of the non-siliceous surface in the absence of a cationic detergent is supported by Applicants' written disclosure, including *every one of the 19 examples*, none of which teach or suggest the use of a cationic detergent to immobilize nucleic acids to a non-siliceous surface. Moreover, the specific exclusion of cationic detergents from the step of immobilizing nucleic acids to the top side of the non-siliceous surface clearly informs persons skilled in this art that Applicants' claimed invention is not the same or should be confused with a prior art method in which a cationic detergent is employed to produce

cationic detergent micellar-DNA complexes that are sufficiently large to be retained on an appropriately selected ultrafiltration membrane as described in the Examiner's reference EP Application No. 0 442 026 ("Schneider", see, e.g., in Schneider, col. 2, lines 20-40).

The incorporation of the other descriptive phrase indicating that nucleic acids are removed or collected "without retrieving materials that have contacted the waste side" of the non-siliceous surface is also evident from the written description and each of the 19 working examples. Although persons skilled in the art are expected to read the specification to interpret the claims, by amending the claims to expressly state the absence of retrieving materials that have contacted the waste side of the non-siliceous surface, persons skilled in the art are immediately informed of a particular difference between Applicants' invention and any other prior art method in which nucleic acids are removed or collected from one side of a membrane along with material that has contacted the opposing side of the membrane. An example of such a method is described in the Examiner's previously cited reference U.S. Patent No. 5,234,824 ("Mullis") in which DNA is first immobilized on one side of a membrane, then eluted by *immersing* the entire membrane into a dish of elution buffer that is mixed on a rotary shaker, and subsequently retrieved in the same elution buffer that has contacted both sides of the *immersed* membrane and that contains the released DNA (see, e.g., in Mullis, col. 9, lines 55-64 and col. 12, lines 29-36). Thus, the amendments to Claims 1 and 51 accurately describe Applicants' invention as disclosed in the specification and distinguish the claimed invention from the prior art.

Applicants further note that the Court of Appeals for the Federal Circuit and its predecessor the Court Customs and Patent Appeals (CCPA) have consistently held that the patent law neither prohibits claims from reciting negative limitations nor requires that claims only recite terms found verbatim in the written description:

> "Compliance with the first paragraph of § 112 is adjudged from the perspective of the person skilled in the relevant art. **This court has held that claimed subject matter need not be described in haec verba in the specification in order for that specification to satisfy the description requirement,** *In re Smith; supra* [458 F.2d 1389, 173 U.S.P.Q. 679 (1972)]; *In re Luckach, 58 CCPA 1233, 42 F.2d 967, 169 USPQ 695 (1971)* . . . The specification as originally filed must convey clearly to those skilled in the art the information

> that the applicant has invented the specific subject matter later claimed. *In re Ruschig, supra, 54 CCPA at 1559, 379 F.2d at 996, 154 USPQ at 123.* **When the original specification accomplished that, regardless of how it accomplishes it, the essential goal of the description requirement is realized.** See, e.g., In re Smythe, Appeal No. 8855, decided June 28, 1993." *In re Smith*, 481 F.2d 910, 914, 178 USPQ (BNA) 620 (citation added, emphasis added).

Regarding negative limitations:

> "As also pointed out in *Smith* [481 F.2d 910, 914, 178 USPQ (*BNA*) 620, 1973 CCPA *LEXIS* 294 at **12] and as admitted by the board, 'the claimed subject matter need not be described in haec verba in the specification in order for that specification to satisfy the description requirement.' **The fact, therefore, that the exact words here in question 'not permanently fixed', are not in the specification is not important.**" *In re Wright*, 866 F.2d 422, 425, 9 USPQ2d (BNA) 1649, 1651 (citation added, emphasis added).

Applicants respectfully submit that the claims, as amended herein, accurately describe the claimed invention as disclosed in the specification and in a manner that accurately distinguishes the disclosed invention from the prior art as permitted by the patent law and without adding new matter. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

Response to Rejection Under 35 USC § 102(b): the Ogawa Document

The Examiner rejected Claims 1-5, 9-14, 24-26, 28-30, 32, 39, 44, 50, 51, 58-60, and 62 as anticipated by European Publication No. 0 431 905 ("Ogawa"). Applicants respectfully traverse the rejection for the reasons given below.

The Examiner relies on Ogawa as follows:

> "Ogawa **teaches** a process for isolating DNA comprising applying DNA comprising **applying a solution (triptone, NaCl and yeast extract) containing DNA and proteinase K** to a membrane, which can be any commercially available membrane, for example polysulfone (non-siliceous). (e.g., col. 3, ll. 37-41). Ogawa **teaches** that washing with an appropriate buffer solution would increase yield, and gives TE-buffer as an example (e.g., col. 3, ll. 45-50). Ogawa also **teaches** that DNA is released from the membrane using shaking in a volume of TE buffer, where the

> eluate is recovered by pipette (without penetration through the membrane or contact with opposing surface). (e.g., col. 4, ll. 35-39). **In sum Ogawa anticipates the rejected claims."** (Office Action, paragraph bridging pp. 3-4, emphasis added).

Applicants respectfully traverse the rejection for the reasons provided below.

For anticipation under 35 U.S.C. § 102 by a printed publication, that publication must *teach* each and every element or aspect of the claimed invention. As explained in MPEP § 2131:

> **"TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM**
>
> " 'A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). 'The identical invention must be shown in as complete detail as is contained in the . . . claim.' *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)." (emphasis in original).

As noted above, the Examiner has relied on Ogawa as a *teaching* of a method for isolating DNA (actually, only bacteriophage DNA) comprising applying a solution containing DNA and proteinase K to a membrane. The membrane in Ogawa is an ultrafiltration membrane (or "ultrafilter) to separate the DNA that has been liberated from denatured phage particles from protein and other impurities (see, e.g., in Ogawa, col. 3, lines 51-54; col. 4, lines 31-37). Persons skilled in the art who read Ogawa are thus taught to denature phage particles to liberate phage DNA using proteinase K on an ultrafiltration membrane and to let impurities separate from the DNA by the fractionation characteristics of the chosen ultrafilter. In contrast, Applicants' claimed method of isolating nucleic acids expressly requires immobilizing the nucleic acids on the top side of a non-siliceous surface in the presence of a salt that is selected from a specified group *and* an alcohol that is also selected from a specified group. As Ogawa is completely void of any teaching or suggestion of employing a step of immobilizing nucleic acids to non-siliceous surface in the presence of a salt *and* an alcohol, Ogawa fails to teach each and every element of Applicants' claimed invention. Accordingly, Ogawa does not anticipate the claims as amended herein.

In view of the above comments, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

Response to Rejection Under 35 USC § 102: the Schneider Document

The Examiner rejected Claims 1-5, 9-14, 24-26, 28-30, 32, 39, 44, 50, 59-60, and 62 under 35 USC § 102 as anticipated by European Publication No. 0 442 026 ("Schneider"). Applicants respectfully traverse the rejection for the reasons described below.

The Examiner relies on Schneider as follows:

> "Schneider **teaches** a process of isolating nucleic acids comprising charging a membrane with cationic agent (Cetyl-trimetil-ammonium chloride) where DNA is immobilized on a matrix (polypropilene or polyethylene), where the hydrophilic surface enables DNA to be recovered easily and speedily after washing operations, which include NaCl, ethanol and water. The DNA is eluted with aqueous solution or low ionic strength (e.g. col. 2, ll. 30-55, bridging ¶ to col. 3). **Therefore, Schneider anticipates the rejected claims.**" (Office Action, p. 5, emphasis added).

Applicants respectfully traverse the rejection for the reasons provided below.

As noted above, the standard for anticipation requires that a reference teach each and every element of a claim. Schneider teaches a method of isolating human genomic DNA on an ultrafiltration membrane. Applicant agrees with the Examiner that persons skilled in the art who read Schneider are *taught* to use a cationic detergent, such as cetyl-trimetil-ammonium chloride, to form cationic detergent micellar-genomic DNA complexes, which complexes are subsequently retained by an appropriately selected ultrafiltration membrane (col. 2, lines 20-55, of Schneider), which subsequently may be washed with a solution salt and ethanol to remove impurities. Thus, persons skilled in this art who read Scheider are *taught* that a cationic detergent is essential to retain human genomic DNA as a micellar complex to an ultrafitration membrane and that a salt and ethanol mixture may be used to wash the retained micellar DNA complex (see, e.g., col. 2, line 43-col. 3, line 3, of Schneider). Nowhere, however, does Schneider teach or suggest that a salt and ethanol mixture may be used *instead of* the cationic detergent to immobilize nucleic acids to the ultrafiltration membrane. Accordingly, Schneider does not teach each and every element of Applicants' claims, as amended herein.

Applicants respectfully submit that the above comments clearly show that Schneider neither teaches nor suggests Applicants claimed invention but rather describes a method of

isolating human genomic DNA by a distinctly different method that employs distinctly different steps from those employed in Applicants' claimed invention. Accordingly, Schneider cannot anticipate Applicants' claims, as amended herein. Reconsideration and withdrawal of the rejection are respectfully requested.

Response to Rejections Under 35 USC § 102 and/or § 103: the Millipore Document

In the Office Action, the Examiner rejected Claims 1-3, 5, 9-22, 24-32, 39, 41, 44-50, and 58-64 as anticipated by or obvious over excerpts from a Millipore catalogue (1995) ("Millipore") obtained from the Millipore website (millipore.com/catalogue.nsf/docs/C7485; last visited 02/07/04). For the reasons explained below, Applicants respectfully traverse the rejections.

The excerpts from the Millipore catalogue describe the following microcentrifugation ("spin") products and their uses:

1. Removal of an enzyme from double-stranded DNA (dsDNA) samples using a Micropore-EZ enzyme remover device ("EZ device") is described as having "a high affinity for protein but not for dsDNA", and in particular can remove from solution certain enzymes that are active on or digest DNA but not others. See the lists of enzymes that are and are not removed by Micropore-EZ device in the Millipore document. Thus, the EZ device is an affinity chromatographic device that selectively binds a number of (but not all) enzymes used in various *in vitro* manipulations of dsDNA. For example, the EZ device may be used to separate an enzyme from dsDNA in a solution (i.e., provided the enzyme is known to be selectively bound by the affinity material in the EZ device). The EZ device is placed in a microcentrifuge vial, a solution of enzyme and dsDNA is applied to the top of the EZ device, the vial with the EZ device is spun briefly (e.g., 12,000 x *g* for 1-2 minutes) in a microcentrifuge, and the aqueous "filtrate" containing the dsDNA that has passed through the enzyme-affinity material present in the EZ device is removed from the bottom of the vial.

2. Microcon Centrifugal Filter Devices ("Microcon") contain a low-binding YM regenerated cellulose ultrafiltration membrane. The Microcon devices are offered in different ranges of ultrafiltration cut-offs (size ranges) and may be used in concentrating, de-salting, and purifying microsamples of proteins *and* nucleic acids. Thus, Microcon devices are ultrafiltration devices that indiscriminately retain any molecule having a size within the fractionation range of the particular ultrafilter present in the device. To separate out certain sized molecules from a

solution, the Microcon device with appropriate ultrafilter is placed in a microcentrifuge vial, the solution is applied to the top of the small ultrafilter in the Microcon device, and the vial with the Microcon device is then spun in a microcentrifuge for a recommended time depending on the size of the molecules in the solution. The Microcon device is then placed in an inverted position in a new microcentrifuge vial that is spun to drive a small amount of liquid containing the concentrated molecules from the ultrafilter and into the new vial.

Millipore also describes the simultaneous use of the EZ device attached to a Microcon device to purify dsDNA that was subjected to an *in vitro* manipulation by an enzyme that is known to be selectively bound by the affinity EZ device. In this process, the EZ protein affinity device is fixed to the top of a Microcon ultrafiltration device, and the connected devices placed in a microcentrifuge vial. A solution is applied to the top of the EZ device, and the vial is spun at a recommended time in a microcentrifuge. During the centrifugation, the solution passes through the EZ device where the enzyme is bound and then through the Microcon ultrafilter where the dsDNA should be retained. The devices are then disassembled, and the dsDNA retrieved from the Microcon ultrafilter as described above.

First, Applicants note for the record that devices such as the Millipore Micropure-EZ Enzyme Remover devices that contain a membrane that selectively binds certain enzymes and permit double stranded DNA (dsDNA) to pass through to the other side of the membrane clearly do not involve immobilizing nucleic acids to a top side of a non-siliceous surface in the presence of a salt and alcohol or subsequently removing the nucleic acids from the same top side of the surface according to Applicants' claimed invention.

In contrast, the Microcon centrifugal ultrafiltration devices contain an ultrafiltration membrane that can permit a solution of DNA to be concentrated and/or de-salted by retaining the DNA on a single side of the ultrafiltration membrane in the device, provided a device containing the appropriate molecular weight cut-off is selected that will retain the desired size of DNA. However, *nowhere* does the Millipore catalog description of Microcon centrifugal ultrafiltration devices teach or suggest Applicants' claimed method of isolating nucleic acids in which nucleic acids are charged to and immobilized on a top side of a non-siliceous surface in the presence of a salt (selected from a preferred, specified group) *and* an alcohol (also selected from a preferred, specified group), followed by applying an elution agent. In particular, not a single table in the

description of Microcon centrifugal filter devices teaches or suggests a process of immobilizing nucleic acids to the top side of a non-siliceous surface in the presence of a salt *and* an alcohol. Moreover, the text of the Microcon product description actually *teaches away* from methods employing salt and ethanol, e.g., ethanol precipitation of DNA from solution or use of high salt concentrations for binding single stranded nucleic acid to cellulose membranes:

> "Ultrafiltration in Microcon devices provides a fast, efficient **alternative to EtOH precipitation** for recovery, concentration and desalting of nucleic acids. See Figure 1 for DNA recovery comparisons between the two methods. Figure 2 compares typical recoveries of nucleic acids with Microcon and by ethanol precipitation. 32P labeled nucleic acid samples (pBR322, RNA transcript [pSPT 18-neo]) were spun in Microcon YM-30 at 7,000 xg for 5 min and a mixed base oligomer (25mer) was spun in Microcon YM-3 for 1 hr. **High salt concentration should be avoided** with RNA and oligos, since this promotes binding of single stranded nucleic acids to cellulose-based membranes." (paragraph bridging pages 2 and 3 of 11 of the Microcon description).

The superior yields using Microcon ultrafiltration devices as compared to ethanol precipitation of nucleic acids from solution are shown in Figure 2 of the product description (see, page 3 of 11 of the Microcon description). Thus, a person of ordinary skilled in the art who reads the Millipore description of Microcon ultrafiltration devices is *taught* to employ Microcon devices instead of methods employing salt and ethanol and that high salt concentrations should not be employed with the Microcon devices. Such teaching and guidance clearly are antithetical to employing the steps required in Applicants' claimed methods in which nucleic acids are immobilized to a non-siliceous surface in the presence of a salt and an alcohol. Moreover, according to Applicants' invention, the salt is present at a concentration of at least 10 mM in Applicants' process, and high yields of nucleic acids, including RNA, are obtained even with very high concentrations of salt (see, e.g., Claims 1, 28-30, as amended herein, and, in the specification, Example 11 and Table 9 at p. 29,line 5-p. 30, line 4, regarding useful salt concentrations; Example 15 and Table 12 at p. 32, line 15-p. 33, line 4, regarding high salt and RNA).

The above comments show that the Millipore document not only fails to disclose each and every step of Applicants' claimed invention, but actually directs persons of ordinary skill in the art away from methods using the salt and alcohol components employed in the steps of

Applicants' invention. Accordingly, the Millipore document fails to teach or suggest Applicants claims, as amended herein, and the Examiner is respectfully requested to reconsider and withdraw the rejections.

In view of all of the above comments and amendments, Applicants submit that the claims are now in condition for allowance. Accordingly, entry of the amendments and allowance of the claims are respectfully solicited.

Respectfully submitted,

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June 22, 2005
Date

Melanie A. McFadden
Melanie A. McFadden